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Translation

PCT/FR2004/000005

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference BCT030174	**FOR FURTHER ACTION**	See Form PCT/IPEA/416
International application No. PCT/FR2004/000005	International filing date (*day/month/year*) 06 janvier 2004 (06.01.2004)	Priority date (*day/month/year*) 07 janvier 2003 (07.01.2003)
International Patent Classification (IPC) or national classification and IPC G01T 5/08		
Applicant CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE -CNRS-		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☐ *(sent to the applicant and to the International Bureau)* a total of _____ sheets, as follows:

      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 06 juillet 2004 (06.07.2004)	Date of completion of this report 29 April 2005 (29.04.2005)
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No. PCT/FR2004/000005

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:

☐ international search (under Rules 12.3 and 23.1(b))

☐ publication of the international application (under Rule 12.4)

☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ The international application as originally filed/furnished

☒ the description:

pages 1-21, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

pages 1-25

pages* _____, as originally filed/furnished

pages* 22, 25, 26 received by this Authority on 02 February 2005 (02.02.2005)

pages* _____ received by this Authority on _____

☒ the drawings:

pages 1/3-3/3

pages* _____, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☒ the claims, Nos. 1, 17, 22

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/FR2004/000005

Box No. I Basis of the report

1. With regard to the language, this report is based on:

☐ the international application in the language in which it was filed

☐ the translation of the international application into _____, which is the language of a translation furnished for the purposes of:

☐ international search (Rule 12.3(a) and 23.1(b))

☐ publication of the international application (Rule 12.4(a))

☐ international preliminary examination (Rule 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☐ the description:

pages 1-21 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the claims:

pages claim n°: 1-25 as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* 22,25,26 received by this Authority on 02/02/05/letter of 02/02/05

pages* _____ received by this Authority on _____

☐ the drawings:

pages 1/3-3/3 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☒ the claims, Nos. 1,17,22

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Box I: Basis of the opinion

The amendment submitted with the letter dated 2 February 2005 and relating to claims 1, 16 and 22, defines the following feature: "at least one fibre" is "radiolucent".

However, a radiolucent fibre is not specifically mentioned in the description.

Consequently, the new claims 1, 16 and 22 are not supported by the description, contrary to the requirements of PCT Article 6.

Since the added amendment does not meet the above requirement, it has not been taken into account in the international preliminary examination. The present report therefore relates to the claims as originally filed.

Observation: in the embodiment (page 9, line 24 to page 10, line 13, figure 2), a fully radiolucent dosimeter is described.
[However, it is unclear how said apparatus can operate as a device for measuring a radiological radiation dose if it is fully radiolucent (100%)].

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2,3,4,6,7,8,10,11,13,14,15,17,19,20,21,22,23,24,25	YES
	Claims	1,5,9,12,16,18	NO
Inventive step (IS)	Claims	2,3,4,6,7,8,10,11,14,15,20,21,22,23,24,25	YES
	Claims	1,5,9,12,13,16,17,18,19	NO
Industrial applicability (IA)	Claims	1-25	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

A. Reference is made to the following documents:

D1 : DE 101 35 092 A (HAHN MEITNER INST BERLIN GMBH) 30 January 2003 (2003-01-30)

D2: PATENT ABSTRACTS OF JAPAN vol. 015, no. 309 (P-1235), 7 August 1991 (1991-08-07) -& JP 03 108687 A (MITSUBISHI ATOM POWER IND INC), 8 May 1991 (1991-05-08)

D3: FR-A-2 582 100 (CENTRE NAT RECH SCIENT) 21 November 1986 (1986-11-21)

B. CLAIMS 1-15, 16-21

1. **LACK OF NOVELTY AND INVENTIVE STEP**

1.1 The present application does not meet the requirements of PCT Article 33(1), since the subject matter of **independent claim 16** does not comply with the criterion of novelty as defined by PCT Article 33(2).

1.2 Document D1 (see figure 1) describes (the references between parentheses apply to said document):

a real time measurement device for measuring a radiological radiation dose, including a dosimeter (1) with optical measurement fibres (3), positioned in the area to be examined and arranged to generate a light signal when it receives an incident radiological radiation, means for measuring said light signal (4) outside the area to be examined following the transmission thereof along the optical measurement fibre (3), and means (11, 12, 13, 15) for determining the radiological radiation dose.

1.3 The same argument applies, mutatis mutandis, to the subject matter of the corresponding **independent claim 1**, which is therefore not novel either.

1.4 The subject matter of claims 5, 9, 12 and 18 does not comply with the criterion of novelty defined by PCT Article 33(2) (see D1, figure 1).

1.5 The subject matter of claims 17 and 19 does not involve an inventive step as defined by PCT Article 33(3) (see D2, page 8, lines 14-30, figure 1; and also D1, figures 1 and 2).

1.6 The subject matter of claim 21 does not involve an inventive step as defined by PCT Article 33(3) (see D3, abstract, figure 1).

2. NOVELTY AND INVENTIVE STEP

2.1 The combination of features of claims 2-4, 6-8, 10-11, 14, 15 and 20 is not contained in the prior art and

does not appear to be derived in an obvious manner therefrom.

3. **ADDITIONAL OBSERVATIONS**

3.1 However, the applicant should bear in mind that the subject matter of dependent claims 2-4, 6-8, 10-11, 14, 15 and 20 might lack unity of invention as per PCT Rules 13.1 and 13.2.

C. CLAIMS 22-25

1. **NOVELTY AND INVENTIVE STEP**

1.1 Document D1 (see figure 1), which is considered the prior art closest to the subject matter of **independent claim 22**, describes (the references between parentheses apply to said document):

a dosimeter (1) with optical measurement fibres (3), positioned in an area to be examined and arranged to generate a light signal when it receives an incident radiological radiation, means for measuring said light signal (4) outside the area to be examined following the transmission thereof along the optical measurement fibre (3), and means (11, 12, 13, 15) for determining the radiological radiation dose.

Consequently, the subject matter of claim 22 differs from this known dosimeter in that the radiological facility furthermore comprises a radiation generator, an X-ray detector and means for displaying the received radiation

dose as well as X-ray images of the area to be examined.

1.2 The subject matter of claim 22 is therefore novel (PCT Article 33(2)). The problem to be solved by the present invention can be considered to be that of providing a radiological facility wherein images of the received radiation dose as well as X-ray images of the area to be examined can be displayed.

1.3 The solution to said problem, as proposed in claim 22 of the present application, is considered to involve an inventive step (PCT Article 33(3)) for the following reasons:

the skin dose received by a patient during examinations is known in real-time, and X-ray images of the area to be examined can be simultaneously displayed.

1.4 Claims 23-25 are dependent on claim 1 and therefore also meet, as such, the PCT requirements of novelty and inventive step.